THE CLIFF-DWELLERS
OF THE
SAN JUAN VALLEY

By

NEIL MERTON JUDD

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P R E F A C E.

In treating a thesis of this nature, the student of history undertakes much. Not only does he draw the antagonism of those who have already formed conclusions on the subject he treats, but he also receives the criticism of other students whose theories fail to harmonize with his. In preparing this paper, the writer has not attempted to produce a monumental work that should stand for all time, but rather to give in simple language the results of his personal observations and study, that others may gain the same picture of prehistoric life that he has gained. Future observations will no doubt disprove many of these conclusions, but the author believes that every impression herein conveyed is supported by the latest archaeological research.

The text has been limited to the so-called "Cliff-dwellers" of the San Juan Valley because those individuals represent possibly the highest stage reached by the ancient inhabitants of the district under consideration.

In submitting this paper the author begs to acknowledge his indebtedness to Dean Byron Cummings of the University of Utah and Dr. Edgar L. Hewett, Director of the School of American Archaeology, for invaluable guidance during four summers of field work. The author is further indebted to

the Reports of the Bureau of American Ethnology and various pamphlets of the School of American Archaeology for information concerning those ruins which he has not personally visited.

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Neil M. Judd

INTRODUCTORY NOTE.

Showing location of San Juan Valley in the ancient Pueblo Area

OUTLINE MAP
OF THE
UNITED STATES,

LOCATION OF THE DISTRICT.

As the accompanying map will show, the San Juan Valley occupies only a small portion of the Ancient Pueblo area. Throughout the greatest part of Utah, Arizona and New Mexico, and the southwestern corner of Colorado, the ruined holmes of an ancient people may be found on the sunny side of nearly every canyon and on the top of nearly every mesa. Whoever these people were, they were sedentary, home-loving; they relied for sustenance upon the vegetation of the regions they occupied, not upon its animal life.

The San Juan Valley is only one of the ancient culture centers of this home-building people. The region of which we speak may be roughly designated as that immediately surrounding the meeting point of the four commonwealths, Utah, Colorado, Arizona and New Mexico. It follows the San Juan River and includes all of its tributaries, except those in the neighborhood of Navaho Mountain.

To the South of this district lies the Navaho reservation; to the north lies that of the Ute, with the Southern Ute reservation in southwestern Colorado. The land, with the exception of the Indian reserves, belongs mostly to the government, since its lack of water has made it generally useless for agricultural purposes.

PHYSIOGRAPHY OF THE SAN JUAN VALLEY.

For the most part, the region is without water - the great stretches of barren land being broken only by

deep gorges or high isolated buttes, left through ages of erosion. The rock is almost exclusively sandstone, pinkish-yellow in color, with just enough dark streaks to lend an exquisite beauty to the whole. From these rugged canyons back to the mountains one will find a constantly changing vegetation which, together with the varying rock formations, creates a continually broadening film of southwestern desert scenery.

The highest mountains in the district are the Abajo, 11,500 feet, and the Elks, 11,000 feet. Other lower ranges may be seen to the east and south, but they are much scattered and are usually beyond the valley of the San Juan. From the mountains long mesas, or tablelands, from 5000 to 8000 feet high jut out into the valleys. These great benches are almost perfectly flat and often cover immense areas. Their tops are covered with dense growths of cedar and piñon pine. In these forests one occasionally finds a small, protected, grass-bottomed park, the haunt of one or more droves of wild horses or cattle. In the canyons one frequently finds small clumps of rock pine crowded against some shaded cliff, but more often the vegetation is limited to typical canyon brush, willows, scrub oak, wild cherry, alder, aspen, birch, a few lonesome cedars, and plenty of sage, chaparral, and cactus.

None of the tributaries to the San Juan furnish water throughout their entire course the year round. Immediately following each summer rain, the usually dry stream beds are roaring torrents of muddy waters that uproot and carry on every movable thing in their wild paths. Despite the lack of running water, a number of fairly large springs may be found, if one knows the country, and water may nearly

always be secured by digging holes in the sandy stream beds.

The climate of the San Juan Valley is generally pleasing. Spring arrives early. The excessive heat of summer lasts from May until August when the annual rains come to dampen the parched ground and coax forth a short growth of grass and white sage.

What game formerly haunted the mesa tops has been exterminated by the Indians. Now and then one notices the fresh tracks of a deer or a mountain lion, but the animals themselves are rarely seen. Even the wild turkey, which must have been very numerous at the time the cliff houses were built, is now found only in small flocks on the highest mountain ridges. The San Juan River contains a few fish which are tabooed by the Indians and seldom eaten by the whites. In some of the canyons wild raspberries, sweet currants, service berries, and other summer fruits may be found. The potato, gourd, and squash also seem to have been indigenous to certain parts of the district, especially on the southern side of the river. Whether corn and beans were introduced by the ancient inhabitants still remains to be proved. Although evidence of both have been found in the earliest dwellings, nothing has, to my knowledge, been discovered that would indicate that either grew uncultivated.

This is the San Juan Valley at the present time. We cannot believe that any great climatical or geographical changes have taken place since the migration of its ancient inhabitants unless it is a continued drying up of the water supply. Looking back over an unknown number of years, we can scarcely under-

stand why a people should have selected such a repelling country in which to build their homes. There was certainly little else than the seclusion of the district to attract them- the scarcity of water and of game would have hindered rather than have encouraged their coming.

We know, from the care used in building, that the early dwellers were not a nomadic people. We also know, from the manner in which their homes were built, that they were not warlike but, on the contrary, were on the defensive during the greater part of the time they occupied the region.

ARCHAEOLOGICAL REMAINS.

There are, throughout the San Juan Valley, two distinct types of ruins. The first of these, which we will call Pueblo ruins, were built either in the valleys or on the mesas and were either small isolated houses of two or three rooms, or large, several-storied communal dwellings. The second class we will call Cliff-dwellings, from their location in natural caves in the canyon walls. Possibly the only real distinction that exists between these two classes is their location. Both the valley pueblos and the cliff houses were built by the same people, but a change in environment so affected the lives of the pueblo dwellers thata distinct type of dwelling resulted. This has received its name solely from its location, not from any difference in its builders. The Cliff-dwellers then, were house-builders who, for certain reasons, chose to erect their homes in naturally defended recesses in the cliffs, and the valley

and mesa Pueblos were people who built similar communal dwellings in the open. The Spanish word "pueblo",(settlement, village) may quite properly be used to designate a ruin of either class. The second group, the Cliff-dwellers, must also be divided, for we find in many caves evidence of two distinct occupations. The earlier dwellers we call the "Basket-makers" for they apparently had not yet learned the art of pottery manufacture. The second occupation, which in many cases, seems to be very closely allied with the first, we commonly call the "Cliff-dwellers", for it is their dwellings we see today while wandering through the canyons of the Southwest.

While these people had no alphabet, they undoubtedly employed a system of signs or symbols to convey information to each other. These figures were scratched or chipped into the rocks along the trails, or merely traced in the samd. Again, these petroglyphs may have proved a medium toward callind down the blessing of the Great Spirit, or they may have been carved for pure amusement, just as similar symbols are carved today along the banks of the Rio Grande.

WHO WERE THESE ANCIENT PEOPLE ?

At this point the reader may rightly ask the question: Who were these ancient people? In answer I can only say that recent evidence points to the cliff-dwellers of the San Juan Valley as the ancestors of the modern Pueblos of the Rio Grande Valley, and American archaeologists concur, I believe, in this supposition. General statements must be avoided,however, for there has been a great infusion of foreign

blood and many other other changes to cause a difference betweem the Pueblo of today and prehistoric times.

The differences in pottery and utensils, and manner of house construction have, no doubt, been caused by difference in environment and contact with Europeans. The greatest dissimilarity, however, is not domestic but physical. Unlikenesses in cranial forms are easily distinguished and it is this that cautions us against saying too hastily that the modern Pueblos are descendants of the Cliff-dwellers. The cranial form of the living Pueblos is predominantly(50% -75%) brachycephalic. The ancient inhabitants of the San Juan pueblos were practically 100% dolichocephalic. At Taos, the northernmost Rio Grande pueblo, the long heads predominate; at all other New Mexico villages the round heads are in a majority. It is highly possible that the evidences of long heads among the modern Pueblos may be traced back to the Cliff-dwellers, but that is a problem for the future.

Every Rio Grande pueblo has one or more clans that tell traditions of migrations from the cliff dwellings. The Tusayan villages have clans that tell similar stories, yet, in nearly every such case, they have more recent traditions that tell of migrations from the Rio Grande.

Now here another distinction must be made. We have, along the Rio Grande, in New Mexico, a series of pueblo villages that apparently do not belong to the Pueblo people of Arizona; yet they build similar houses, have similar habits and similar ceremonies. Traditions among this western

people, however, tell of migrations from the south and west, and general architectural differences would indicate that what similarities do exist have been introduced by migrating clans from the east.

These migrations have takenplace for several reasons. First, opposition from nomadic neighbors, disease, superstition, natural growth of the tribe, or internal dissentions might have made it desirable for all or part of the village to seek a new location. Again, during the Pueblo uprising of 1680, there were many clan shiftings, especially among the eastern villages. And after the final submission of the Pueblos, the Catholic priests formed many new unions in order to secure better control over their charges. Other causes could be mentioned and explained in detail, were it not for the limits of this paper. At any rate, primitive migrations were by no means uncommon.

Now, although the author firmly believes, after careful study, that the Pueblos of the Rio Grande Valley are, despite the changes they have undergone, the descendants of the ancient inhabitants of the San Juan Valley, he does not attempt to say how these people reached their present home. Neither does he attempt to say how long ago they left their dwellings on the San Juan River. If we accept the traditions of some of the Tewa villages of the Rio Grande, their ancestors were living in approximately the same locations five hundred to eight hundred years ago; and other centuries might have been required to firmly establish them there.

Now let me repeat once more that we are not all certain that the Pueblos of the Rio Grande are the descendants of the San Juan Cliff-dwellers, but clan traditions, traces of cranial similarity, architectural forms, and, above all else, a marked resemblance between the modern and ancient ceremonial chambers, or kivas, lead us to believe that migrations have taken place which took the cliff-dweller of the San Juan Valley, either directly or indirectly, to the modern villages of the Rio Grande.

Without further discussion on the Indians of today, let us turn back to the time when they occupied the cliff houses and consider that one period in their evolution. It should be borne constantly in mind, however, that the so-called "Cliff-dwellers" were not a distinct race of people, but that they were simply house-dwelling Indians who, for purposes of protection, built their homes in the cliffs for a given period in their tribal advancement.

THE CLIFF-DWELLERS OF THE SAN JUAN VALLEY.

In developing the treatise "The Cliff-dwellers of the San Juan Valley," we will waive consideration of the earlier migrations of the people, and treat them simply as representatives of one phase of a great human movement that began at some unknown period in the world's history and successfully passed the age represented by the ruins of which we speak. We shall attempt to read from these crumbled walls, and the material they contain, the daily and religious life of their former occupants, the occupations of the people, their pleasures and pains, and learn from the reading, that the so-called "Cliff-dwellers" were real human beings, who found the part they had to play in life and played it well, even though the game was a losing one.

In looking over a ruined cliff house today, the student of history, even the casual tourist, is first attracted by the desolation it represents. The cold, ragged walls, the piles of debris, the quantities of broken pottery, the half-starved cactus plants, all these and more bear mute evidence of the people of long ago, and the years that have elapsed since their disappearance. The silence that pervades the place befits a city of the dead.

By clambering over the deserted dwellings, by wandering through apparent passages, by crawling through low, narrow doorways and penetrating the darkest corners, the student may become fairly familiar with these abandoned towns. He will notice the care and skill with which quantities of broken sandstone were cemented together with adobe mud; he will learn the methods of ancient carpentry, how great beams were trimmed and shaped with fire or blunt stone axes; and he will

see how these crude piles of rock and earth were made to serve as ho mes for a struggling people.

The rooms of these dwellings were not large, the average being only about 7 ft. by 10 ft. Although this seems small, the chambers undoubtedly served their purpose for they were used, not as we use a room today, but primarily for storage purposes. Their occupants undoubtedly spent the greater part of their time out of doors. Their skin and mat beds were no doubt spread in the plazas or on the roofs, just as modern Pueblos do. During the daytime these coverings were folded and piled along the interior wall to serve as seats. Above these skins, ceremonial garments, drying herbs, meat, firewood, and other materials were suspended from poles whose ends were sunk in opposite walls, near the ceiling.

In one corner two or three inches of earth excavated from the floor, served as a fireplace. At one end of this basin four stones, usually of hard composition, were so imbedded in the earth that their narrowed ends formed a rest for round bottomed cooking pots. Over these same stones, (more often on a separate hearth) a thin, smooth stone slab could be placed, on which tortillas or wafer-like cornmeal cakes were baked. There were no chimneys to these primitive stoves. The smoke was allowed to fill the room, escaping through the trap door in the roof or through a small round opening in the upper, outside wall.

So far as known, the only other means of cooking employed by the Cliff-dwellers was the roasting-tray, a shallow basket, coated inside with a half-inch layer of baked ashes . Over the smooth surface, live coals were rolled, the continual motion toasting corn, scraps of meat, nuts, ants,

beetles, or any other morsel.

Refuse from these kitchens and from other rooms of the dwellings, was either crowded into the unused corners of the villiage, dumped in front of the living rooms, or thrown over the cliff. It is in these piles that the student of today gains much of his knowledge concerning the every day life of the old people. Fragments of garments and sandals, bits of partially woven yucca cord, pot sherds, fetiches, basketry, toys, etc. found among the ashes, give us an insight into that lesser side of primitive villiage life not evident in the ruins as a whole.

S O C I A L O R G A N I Z A T I O N.

Scattering bits of evidence seem to favor the adoption of existing tradition and custom as indicative of what the social organization of the ancient Pueblos must have been. The family, as among most primitive people, was the unit of community life. Descent and inheritance were in the female line. Children took the mother's name and became members of her clan. The husband and father remained a member of his mother's clan and was not supposed to inquire concerning the affairs of his wife's people. (*)

Between husband and wife there was great respect, yet neither interfered with the business of the other. Each had his own sphere and kept strictly within it. During the

(*) "Husband and wife belong to different clans; the children belong to the clan of the mother, and take the name of the mother. The mother, not the father, owns the children; and the husband is but the guest of his wife, not the head of the household." -J. W. Powell; 20th Annual Report, Bureau of American Ethnology, p. xciii.

summer of 1910 I was the guest, for a short time, of one of the priests at the pueblo of Santa Clara, on the Rio Grande. The old man had been married over thirty years, yet had never asked the purpose of a small bundle of cotton cloth that had hung above the cradles of his children. That was his wife's business. And she, in turn, had never asked her husband's object in tucking a little roll of green corn husks between the willows of the ceiling, after each harvest had been gathered. Such customs have no doubt come down from early times - they most certainly are not results of Spanish teaching.

The children took the mother's family name, and all persons bearing the same title formed a division known as a "clan." Such a group is simply a number of people whose kinship is reckoned through females. The clan name and the object from which it is derived are the clan totems. The totem is still considered, among the Pueblos, the progenitor of the clan.

Marriage within the clan was strictly forbidden. A youth might marry any maiden of the tribe so long as she did not bear the same name as he, and so long as the union was not strongly opposed by their parents or the clan priests. It is very doubtful if wives were "bought." In celebration of the union, presents were no doubt exchanged and elaborate feasts held, but the matter of decision was undoubtedly left to the young people themselves. If marriage ceremonies were recognized it is hardly possible that others than those directly concerned took part. "Relations between man and woman were both mysterious and holy, and the presence of an officiating third party was never considered necessary."

The various clans were bound together into what we

call a "tribe." This was a varying group, for best archaeological evidence indicates that new clans were often added, either by migrations from other communities or by intratribal arrangement. Then too, dissatisfaction, disease, or mere superstition was oftentimes reason enough for a clan to abandon its home and join another tribe, or build a dwelling of its own in some chosen locality.

Although each Cliff-dweller was a member of three organizations in ancient society, the family, the clan, and the tribe, his obligations to one never interfered with his duties to another. Family ceremonies were held within the seclusion of the home. The ceremonial chamber or kiva was the center of clan religion, if we use this term to designate an Indian's methods of communication with Those Above. Here also was the seat of legislative authority for the clan. The tribe was possibly bound together by a council of clan representatives who met in one of the clan kivas or a larger structure built and owned by the tribe.

It must not be supposed, however, that the Cliff-dweller was occupied solely with ceremonial and governmental duties. In fact these demanded only a small part of his time, for the ancient Pueblo, like his descendants, was most concerned with his struggle against Nature. If we judge rightly, the Cliff-dwellers were free to do just as they pleased, yet their childhood training, at the hands of the clan patriarchs, had been such as to make unneccessary any general laws for the social conduct of villages. These people were bound together by sympathy, not by the modern "spoils" system.

This union in a common cause went even further than mere sympathy. The earlier life of the Cliff-dwellers had created a well marked division of labor in the family. The husband had his work to perform and the wife had hers. A decided distinction was drawn between the two, yet it is only fair to suppose, from what we know of the people, that, when occasion required, the husband lent his wife a willing hand and vice versa.

D A I L Y L I F E.

At marriage, the husband went to live with his wife's people who probably helped build an addition to the clan home. These new rooms were usually constructed by the woman and were always owned by her. If her husband helped at all it was in the heavier work of beam lifting, stone breaking, etc.

In building a home, the location of the dwelling and the material at hand determined the nature of the structure. In the San Juan Valley, sandstone is abundant and was employed throughout the entire region although one occasionally finds rooms made of mud, reinforced with grass or willows or even a log room. The great quantities of broken sandstone forming the talus slopes of the canyons afforded ready material for house building; little trimming was necessary. This stone, together with the mud necessary to hold it together, was all carried up to the cave on the backs of the builders. Usually the only means of entering the cavern was a series of hand cut holes or a precarious one or two pole ladder. Primitive house-building in the caves of the San Juan was by no means an easy task.

Little preparation was necessary. The rock floor of the cave served as foundation. On this, whether flat or on a forty-five degree angle, the walls were built - layers of stone, cemented together with adobe mud. In most instances care was taken to "break" the joints, but one occasionally sees the evidence of less experienced workmen. The walls were seldom more than four and one half or five feet high, and often times much smaller. When the desired height had been reached, roof beams were placed and a few inches of wall built above them. On top of these beams and perpendicular to them, the builder spread a layer of willows or split cedar branches. Over this was scattered a third covering of brush or reeds from the spring; than a layer of grass at right angles to the brush and the whole was buried under a four inch coating of mud. This roof afforded both a yard for its builders and a veranda for later dwellers on an upper terrace.

Most of the rooms were entered through a trap door in the roof although a goodly number, especially in certain districts,were also provided with a small door in the wall. These openings, whether in the roof or in the wall, were, on the average, only fourteen by twenty inches in size. (This fact, together with the low ceilings, has led many people to form the wrong supposition that the Cliff-dwellers were a race of pygmies.)

Ordinarily there were no other openings but, in some of the larger villages, round holes, three or four inches in diameter, built near the ceiling, are not uncommon. It is unknown whether these were designed primarily as an exit for smoke or as a means of furnishing light - to a certain

extent they undoubtedly answered both purposes.

In one room of the new home a fire place was erected; in another, usually a rear chamber, the metates or grinding stones, occupied a fixed corner. Usually, these mills were arranged in a series of three, varying in degree of fineness. The corn, broken on one, was passed along until it left the third stone a well pulverized meal.

It was the wife's duty not only to build the house but also to care for it. She ground the meal, carried water and wood, made the vessels and cooked the meals. She made sandals from the yucca plant; she wove baskets and she made the family garments for everyday use.

P O T T E R Y M A K I N G.

Of her less exhaustive labors, one of the most important and, at the same time, one of the most beautiful in results, was pottery making. She had not forgotten the art of basketry which had come down to her from the remote past, but the clay bowls had proved so vastly superior for general purposes that they had replaced the more primitive vessels except for carrying grain, wood, etc.

The ancient potter of San Juan Valley made four distinct varieties of earthenware vessels: (1)corrugated; (2)undecorated grayware; (3)white with black decorations; (4)red ware, decorated or undecorated.

The first of these, the corrugated or coiled ware, which was undoubtedly the earliest form of clay vessel used, was employed in the cooking and rougher household uses. In

manufacturing this class of utensil, long fillets of clay were coiled round and round in the shape desired and pressed together with the fingers, as the work proceeded. The interior was smoothed with a stick, fragment of stone, or pot sherd; the outside left untouched unless the maker took a notion to do a little decoration with his thumb nail or a bit of wood. These vessels are mostly jars, and were used over a flame.

The second class of pottery, the undecorated gray ware, was made in the same manner as the corrugated vessels with one exception - outside, as well as inside, was smoothed off with stones. Their shape would indicate usage as food vessels. Bowls form a majority in this group, although wide mouthed ollas are not uncommon.

The only difference between the second and third classes is greater skill. The gray bowls were merely smoothed, the superior vessels were polished, painted with an alkaline wash when nearly dry, then decorated with geometrical or conventionalized animal designs. This variety was seldom used near a fire. It is known that most of the designs represent natural objects with whom the Cliff-dweller associated as "brothers," children of the same great Sun-father, therefore was undoubtedly loath to let the spirit, which the bowl contained, suffer unnecessarily.

The red ware was not manufactured in all parts of the San Juan Valley since it requires a special clay for complete success. The presence of a limited number of red specimens at ruins where they could not possible have been made, would indicate that the red ware was highly prized by those

people unable to produce it, and was therefore the cause of a considerable commerce between the various inhabited districts.

All these varieties were burned in practically the same way despite the fact that modern makers use different means of producing salable pottery. I have never heard of ovens or fire-holes being found in cliff houses. Indications in some ruins lead to the supposition that the pottery was piled in a heap, completely covered with some material, and fired as the material slowly burned. Relying partially upon modern traditions, this heat giving substance was not always the same. Very dry grease-wood, piñon, charcoal and the dung of herbivora are said to have been used. Zuñi tradition tells of a limited use of bituminous or cannel-coal but this material could not have existed among the canyons of the San Juan.

Many beautiful stories are told among modern Pueblos concerning the "jar spirits." That such spirits do exist is never doubted for "the noise made by a pot when struck or when simmering on the fire, is supposed to be the voice of its associated being. The clang of a pot when it breaks or suddenly cracks in burning is the cry of this being as it escapes or separates from the vessel. That it has departed is argued from the fact that the vase, when cracked or fragmentary, never resounds as it did when whole." (*)

(*) FOURTH ANNUAL REPORT, BUREAU OF AMERICAN ETHNOLOGY, P 511.

Concerning the weaving and garment making of the ancient housewife, little need be said here. She used everything that could be utilized; cedar bark, grass, yucca, roots, reeds, vines. From these materials, mats, baskets, nets, bags, sandals, belts, capes, skirts, breech-cloths, and entire garments were produced. Feathers and the fur of small animals also played an important part in the winter garments and in decorations for ceremonial occasions. In the ceremonial garments the wool of the mountain goat and cotton fibre secured by trade with the peoples of the Salt and Gila Rivers, also played an important part.

Despite the fact that much space has been given here to her domestic occupations, the life of the woman of the Cliff-dwellings was not a hard one. At no time was she called upon to perform the trying duties of her wilder, nomadic sisters. I know of no primitive people who respected their women more than the ancient Pueblos of the Southwest.

D U T I E S O F M E N.

Although his wife was the head of the house, each Cliff-dweller had certain tasks awaiting him each day that did not require the supervision of his "better half". He found some time to hunt, yet his prime duty was the care of the community fields, for the Cliff-dwellers were a sedentary people, wholly dependent upon the products of their thirsting gardens. Here he went each day to beat off the crows or straighten the plants, half buried beneath the night's drifting sand. When the pueblo was large and suitable land limited, themen of the tribe often found it necessary to main-

tain fields at some distance from the village. (*) It is reasonable to suppose that, when occasion demanded, these men formed a summer colony in some distant canyon, returning to their village only after the harvests had been gathered. Unless hostile pressure made it impossible, these summer colonies might, in time, become permanent homes with kivas and winter ceremonies which were associated only with fixed places of abode.

With the corn, beans, and squash carefully dried and stored away in rear rooms or closed caches in the cave, the male members of the community turned their attention to a winter-long series of ceremonies.

The Cliff-dweller was a devout being whose respect for the Great Mystery was greatly increased by the nature of his environment. It is not my desire to give a detailed account of his ceremonies, but, to better understand the purpose of them, it is necessary to partially understand the religion of the Cliff-dweller. Here again we must resort to the modern Pueblos for information concerning the thing of which we write. This analogy may be drawn, however, for the

(*) Nearly every modern Pueblo village supports summer colonies. "In Tusayan, where the most primitive type of Pueblo architecture is found, summer houses are usually of brush; in the Cañon de Chelly, they are cliff-dwellings; on the Rio Verde, they are cavate lodges, boulder-marked sites, and single house remains; but at Zuñi they have reached their highest development in the three summer villages of Ojo Caliente, Nutria, and Pescado." -Cosmos Mindeleff, 13th Annual Report, Bureau of American Ethnology, p. 261.

Moen-kapi, belongs to Oraibi but is seventy-five miles distant; Nutria, Pescado, and Ojo Caliente belong to Zuñi and are from 15 to 25 miles distant.-16th An. Rep. Bu. of Eth. p 156.

The use of summer villages among the Pueblos might account for the small isolated ruins that dot the long mesas of the Southwest.

present day Pueblos of the Rio Grande not only employ kivas, almost identical to those used by the ancient inhabitants of the San Juan, but they also use, in their ceremonies, objects similar to those found in the ruins of the Cliff villages. We believe we are safe in assuming that the fundamental principles of the modern Pueblo ceremonies are little changed from those practiced during the occupation of the cliff-houses. The ceremonial customs of a primitive people change slowly.

R E L I G I O N OF THE C L I F F-D W E L L E R S

The ancient Pueblos were respecters of Nature. They looked upon Sun and Earth as the father and the mother of all things. The birds, the animals, the flowers, were their brothers, children of the same parents. Their relationship between man and the lesser inhabitants of the universe might be spoken of as the foundation of the Pueblo religion.

From the day of birth, the Indian child was taught reverence for the Great Being and obedience to His wish. He learned from his devoted mother the names of his brothers of the earth and air. He heard the name of the Great Mystery only in whispers - His name was never spoken aloud.

As the child grew older his grandparents assumed the duties of instructor. He learned little stories of clan heroes and myths of the animal and bird world. He was taught the use of bow and arrow. He learned to trap the rabbit and to snare the wild turkey. He learned the flowers and the other plants; their parts and uses. He heard the story of the creation; became familiar with the struggles of his clan ancestors and longed to share the happiness of their homes in

the big kiva of the Mystic Lake, far to the south. The child of the Cliff-dwellers, like the child of the modern Pueblos, became familiar with Nature and through that familiarity, gained a vast respect for the works of Nature - for the things he could not understand.

He saw the miracle of the seed and the marvel of the egg; he knew the power of lightning; he had seen the work of fire and water. He blew the dust from his doorway or from the ground where his food was placed, and reasoned, quite naturally, that the North winds or the gentle breathings of nightfall were caused by a being vastly more powerful than he.

He had seen men die for lack of water and had seen his fields spring into maturity under the infrequent rains of the desert skies. He had but one method of reasoning and this told him that supernatural powers were responsible for the colossal reproductions of things he himself had done. There was a cause for every effect produced and, in his unscientific mind, the only creatures who could produce effects against which he could not defend himself, were Great Beings of unknown regions. They were the Great Mysterics; they were Those Above.

To the simple mind of the Cliff-dweller, these Superior Powers were capable of protection or destruction, according to his ability or failure to remain in Their favor. It is natural then, since, in his desert home he was solely at the mercy of Nature, that he should spend every moment not necessary to his mortal existence in efforts to appease the wrath or win the continued favor of Those Above.

He tucked "prayer-sticks", bundles of bright feathers, bright pebbles, etc. into rock crevices or isolated spots designated as a shrine to certain unseen Forces; he scattered sacred meal to the cardinal points as he said his wordless prayers; he tossed the choicest morsels of food into the fire, that those whom he respected might not go hungry. In the spring he danced to Awañu, the keeper of the waters, that abundant rains might feed his scraggy corn fields; after the harvests, he danced in acknowledgment of a plentiful crop or in hopes that he might gain the good will of the Great Mystery, in anticipation of the next season's planting. These dances, like all the other ceremonies(except the daily devotions, which were always performed in the home) were prepared for in the kiva, the ceremonial chamber of the clan, the earthly home of Those Above.

T H E K I V A.

The kiva, or estufa, as the Spaniards called the room, of the modern Rio Grande Pueblos, has changed very little since their ancestors abandoned the cliff villages of the San Juan Valley. The old structure was, almost without exception, round and at least partially subterranean. Its size varied according to the requirements of the clan or the limits of its location. The number of kivas in a village depended solely upon the number of clans. It is not impossible that in some instances, two or more small clans occupied the same estufa, and, in others, that the clan abandoned or outgrew its kiva with the decrease or increase of its families.

Like the ordinary living room, the kiva was built of stone, held together with mud. Its floor was usually at least six feet beneath the surface; its mud-covered roof formed a continuation of its surroundings. The main part of the circular wall was only three or three and one-half feet high. On this, placed at regular intervals were six pilasters which formed the supports for great roof beams. Between these buttresses were deep niches that rose, unbroken, to the ceiling. It is supposed that these resulting shelves were utilized in the display of fetiches and other objects claiming a part in the various ceremonies. Jars also have been found so buried that their rims remained flush with the floor of the niche.

The south recess was always built longer and deeper than the others. Beneath it a passage, averaging two and one-half feet high by one and one-half feet wide and seven feet long, was so constructed as to connect with a small shaft leading to the surface. The size and construction of this chimney-like structure would lead to the conclusion that it was utilized solely as a means of ventilation. Crossed sticks, which occur in the shafts of many San Juan kivas, made any other use impracticable.

Within the kiva, placed about two feet from the passageway, a shield, or altar, was always built. This might have been from fourteen inches to twenty-four inches wide, two and one-half feet high and two inches thick. Smoke stains on one side indicate its use as an air shield for the fire which burned immediately before it. On the

other hand, it is said to closely resemble the altars found in the estufas of the Rio Grande today. To my knowledge, no definite use has yet been assigned to this constant feature of San Juan kivas.

The fire place, just mentioned, is never the same size in any two kivas. The average runs from one and one-half to three feet in diameter, and from three to eight inches in depth. When uncovered, these basins are usually filled with fine, wood ashes. The dry greasewood used in the kiva made very little smoke and this was allowed to fill the room or escape through the roof-opening.

By far the most important feature of the kiva and that which played a large part in the ceremonial life of the ancient, just as it does in that of the modern Pueblos, was the sipapu. This was a cup-lined hole five or six inches deep and two or three inches in diameter, placed almost exactly in the center of the circular chamber."It is the mythical entrance to the lower regions, the gateway by which the first Pueblos escaped from the darkness of the lower worlds. It is the sacred cavity through which comes the beneficient influence of the powers invoked."

According to some of the old men the kiva was first built to inclose this sacred opening. Other old men say that "the kiva was excavated in imitation of the original house in the interior of the earth, where the human family was created, and from which they climbed to the surface of the ground by means of a ladder and

through just such an opening as the kiva hatchway."*

In the lower part of the north wall, directly opposite the fire shield, or altar, one or two small niches were usually left, in which tools used about the kiva or ceremonial objects or meal bowls, were kept. These holes were all carefully plastered, showing that the part they played was not unimportant.

The kiva was entered by means of a ladder which extended from ten to twenty feet beyond the hatchway. This opening was of average size, with a raised casing or frame about it, either formed of mud or stones. When desired, the entrance could be closed by drawing over it a curtain of willows, reeds, or woven fibres.

Oftentimes the ancient priest used some symbolic design to decorate the interior of the sacred room. These decorations were frequently used to distinguish the cardinal points, an essential part in the religion of the Pueblos who, in their prayers, address the mythical beings at the various directions. Lightning, sun, cloud, and rain symbols are also used. The snake, especially representations of Awañu, the plumed serpent, was a favorite kiva decoration.

Authorities differ concerning the use to which the kiva was put in early times. It is certain that it was the center of religious life in the clan, but little is yet known relating to its further usage.

According to J. W. Powell, a phratral unit controlled the kiva, which was frequented by members of

*Victor Mindeleff: Eighth Annual Report, Bureau of American Ethnology, pp 117.

no other such unit. Visits might be made, but lingering calls were rare. Mr. Powell says, relating to the use of the modern kiva: " The kiva is a general place for divination, where the signs are consulted for the purpose of determining whether their enterprises will be successful or not. All of the operations of the people and all of the things in which they are most deeply interested are controlled by these ceremonies held in the kivas. Especially is the weather controlled, for it is here that they pray for rain or for the abatement of storm. It is here that the ceremonies are performed which determine the nature of the crops. It is here that health or sickness is found." *

A little further in the same report we find that " the kiva is the gathering place of the brotherhoods, and here they meet, not only for religious ceremony, but to pass the time in conversation or jest. Here the shamanistic orator entertains the people, and here the men do their weaving and the women their basket work. The kiva is the place of rendevous."

On the other hand, Mr. Victor Mindeleff" is of the opinion that, among the Tusayan villages," no women frequent any of the kivas; in fact they never enter them except to plaster the walls at customary periods,

* Twentieth Annual Report, Bureau of American Ethnology, pp. 109.

** Eighth Annual Report, Bureau of American Ethnology, pp. 134.

or during the occasion of certain ceremonies."

Mr. A.F. Bandelier, a pioneer in Southwestern archaeology, says that the kiva was the home of the boys, after they had reached a certain age; a place where they received a training along fixed Spartan methods.

Beyond its religious, and possibly councilar use, even trained archaeologists still disagree as to what part the kiva played in the daily life of the ancient Pueblos.

As we become more familiar with the Indians of today; as they become more interested in our knowledge of their past, we may hope to receive more information from them relating to the present uses to which their kivas are put and this, with their traditions, may aid us in securing a better understanding of the importance of the kiva among the Cliff-dwellers.

H O S T I L E O P P O S I T I O N.

The cliff peoples of the San Juan Valley were not always free to continue, unmolested, their daily labors, or their supplications to the Mysterious Ones. They were constantly at the mercy of nomadic neighbors, against whose depredations Those Above afforded but scanty protection.

The Pueblos had always been a sedentary people; they had never been successful hunters and had never become expert in the use of weapons. Their fields, especially

at harvest time, proved strong attractions to the Walapai and the Apache, nomadic peoples who were still in undisputed possession of the Southwest at the time of the Spanish advent. It is altogether probable that their attacks did not consist of regular invasions and long drawn-out sieges, but sudden raids in which the products of the fields were carried off and the producers killed. It is also probable that many captives were taken, especially women and children, who were either held as slaves or, in time, adopted into various clans of their captors.

Such raids as these have been conducted by the Navaho and other Southwestern tribes in quite recent times. The Tusayan pueblos of Arizona; Zuñi and other pueblos of New Mexico, and the Mexican villages along the Rio Grande, were the object of hostile attacks long after the Spanish conquest. In fact these raids have continued since the American occupation of the Southwest. At the pueblo of San Ildefonso, on the Rio Grande, is a middle aged Navaho who, as a boy, was captured during a retaliatory attack following a Navaho raid. He has been adopted into one of the largest clans among his captors and no thought is now given to his earlier life. Crossing the Pajarito Plateau, one may still see several well beaten trails, worn by the raiders of former times.

We are certain that the Cliff-dwellers of the San Juan Valley were subject to these depredations, for a vast majority of the cliff houses were built for defensive purposes. This is especially evident among the

larger ruins. The front walls are always heavier and less broken by openings than those of the rear. There was seldom more than one entrance to the house and this was nearly always capable of being closed. Port-holes commanded every possible entrance, yet permitted the defenders to remain perfectly secure within the rooms. The occasional discovery of intrusive skeletons, either within the ruins or buried beneath the cliffs, gives evidence that the defenders were at least partially rewarded for their efforts.

The chief result of this hostile pressure was the union of the smaller, isolated dwellings. This had been the case in the earlier history of the people. They were forced to unite because they were absolutely helpless while separated. With an increased population, the small patches of productive land in the deep canyons proved insufficient to support the village, therefore, if peace did come, some of the more dissatisfied clans might migrate to another community or even build a house for themselves in a neighboring canyon.

It must not be supposed that the raids were annual occurences - several years might elapse without any sign of the wilder peoples. Then again, the attacks might follow closely, even several in the same year. At any rate, they were frequent enough to discourage the farming communities.

THE PASSING OF THE PUEBLOS.

There is, as yet, no means of knowing whether this hostile opposition was sufficient to cause a universal

abandoning of the San Juan cliff dwellings. It might have been merely one of many causes. The present condition of these ruins indicate that they were abandoned at practically the same time, yet such a widespread movement could not have been caused by conditions peculiar to only a few of the villages.

Trivial things, from our point of view, have been responsible for Pueblo migrations. The cliff dwellers, like their descendants, were an extremely superstitious people and often fled from the supposed wrath of Those Above, when one of their priests suffered from a decayed tooth, or a simple ear ache. Dreams, resulting from an overloaded stomach of a prominent medicine man, were sufficient to cause a movement of the whole community. Other reasons, just as absurd, might have aided in depopulating the valleys of the San Juan. Migrations were usually accomplished by gradual, individual clan shiftings; Tribal movements were rare but not unknown.

One of the most probable reasons for these migrations was the drying up of the springs and water supplies. Today a small camp must go thirsty while investigating a ruin that formerly sheltered three hundred souls. Of course it is possible that the springs have been covered by drifting sand, but this scarcely seems applicable to every instance. A gradual change in the geographical conditions, resulting in less water for the household and the fields, together with hostile raids on their granaries was, in my mind, a very compelling factor among the forces that drove the Pueblos from their cliff homes in the San Juan Valley.

If I am correct in supposing that the Rio Grande Pueblos are descendants of the cliff-dwellers, and numerous similarities favor this supposition, then we are that much nearer a complete solution of the mystery of the "Cliff-dwellers" for, with a definite beginning, we can easily weed out the foreign influences that have affected the Pueblos since they left the caves, and view them as they formerly were. When their love longs echoed from the caves of the moonlit cliffs, the inhabitants of the San Juan Valley were a numerous people. Since that time, forces over which they had no control, have made it necessary for them to seek more favorable locations. And, if these theories of ancient Pueblo life are not wrong, the reader may quite properly ask, What is to become of the living Pueblos? The answer to that is found, I believe, in the past history of the people.

Before they sought refuge in the canyon walls, these village Indians came together or scattered with the ebb and flow of hostile opposition. They formed compact settlements for mutual protection when the nomadic warriors crowded in upon them and they always separated when that protection was no longer necessary. Among the larger cliff dwellings it is reasonable to suppose that outstanding settlements were necessary, for the small gardens possible in the cramped quarters of the canyon could not have supplied any considerable number of people. In time, these temporary settlements might have become permanent dwellings. There was undoubtedly a more or less constant separating of clans among the cliff dwellers - a movement that ceased

suddenly under hostile pressure.

We see then, that fear of their more warlike neighbors has, in the past, forced the Pueblos into communal dwellings; that, as soon as the cause of this fear was removed, the villages showed a tendency to scatter again. The modern Pueblos still retain this trait.

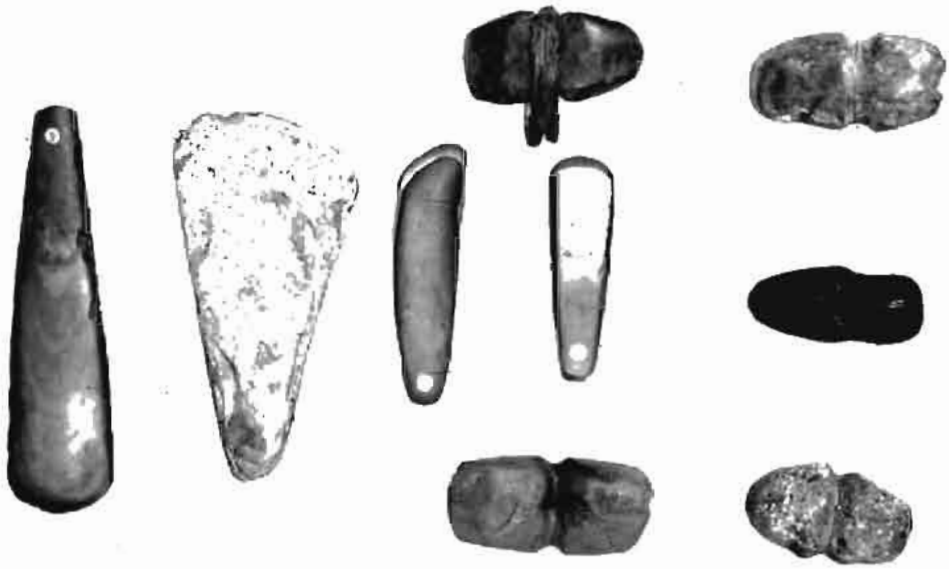
Since the American occupation of the Southwest, the Navaho and Apache have been forced to discontinue their long practiced raids upon the farming communities. The result is the expected one - the Pueblos, no longer fearful of their ancient enemies, continue to occupy, throughout the year, those villages which were formerly used only during the farming season. Even the clan members are building individual houses, at constantly increasing distances from the home village, and are taking their families with them, and are enjoying once more the independent life of their ancestors. With the removal of the cause of that union, there is no further need for the united clans of the Pueblos.

Another, and by no means an unimportant reason for the gradual passing of the Pueblo villages, is the result of education upon the younger people. Despite all the bad things that might be said about it, the life of the white man offers a strong temptation to the modern Pueblo, and a desire to see more of this life is slowly but surely pulling the youth away from the customs of his people and destroying for him and all humanity, the one connecting link between a living people and a race that lived in the misty past.

Black and white bowls.

Ladles — black and white ware.

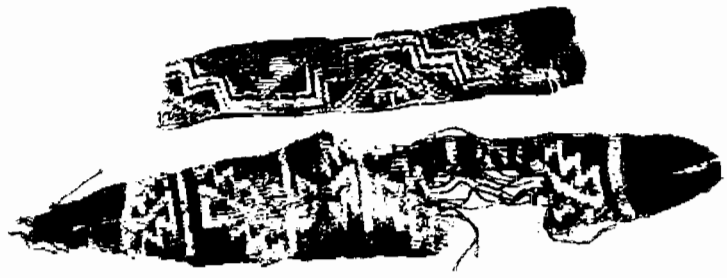
Pitchers — black and white ware.



Stone celts and axe heads.

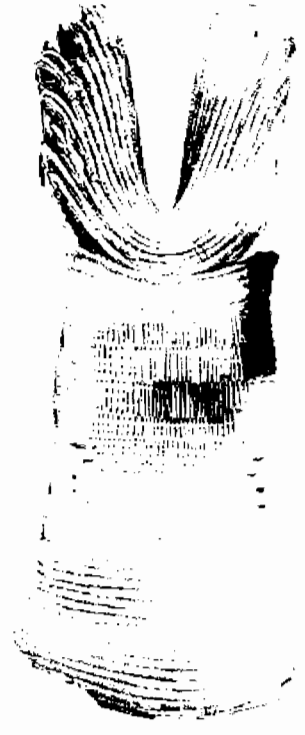
Gray ware olla
on reed rest.

Decoration at neck
produced by failure
to smooth the surface.



Decorative head bands for burden carrying.

Basket-tray of Basket-makers



Ceremonial basket of
Basket-makers

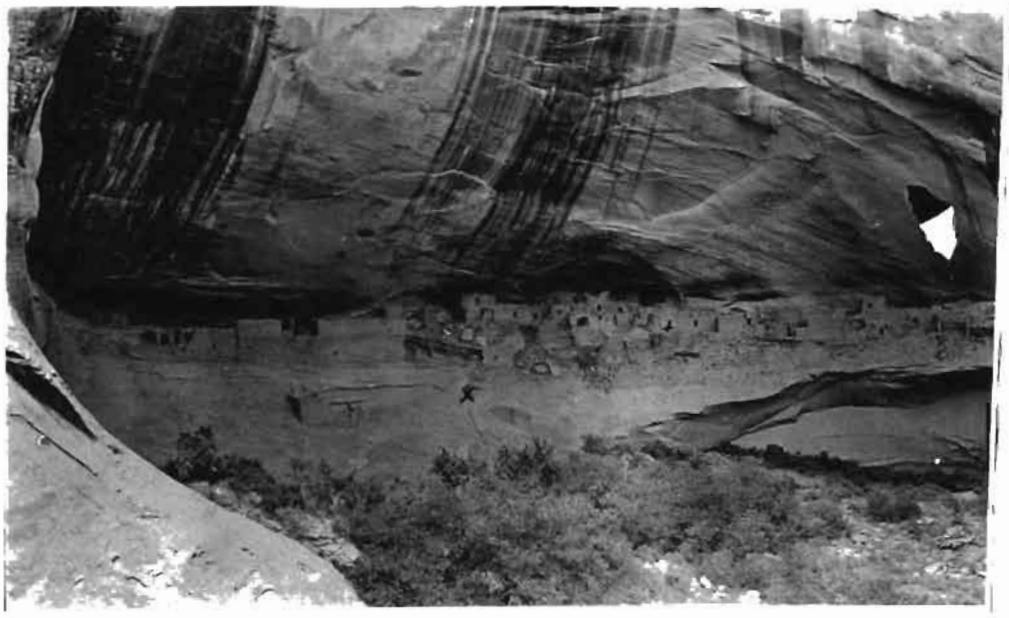
Broad leafed yucca plant
The blades are composed
of innumerable fibre

1 Cedar-bark basket

2 Basket of grass
and
narrow-leaf yucca blades

Cliff house on slanting rock, showing construction methods

Grain caches near a cliff-house



Kit-Sil (Kēet-Sēel) — Broken-Pottery House

~ Contains 148 rooms ~

Only means of entrance is by aid of pole and stone steps at (X)

Beta-ta-kin — Hillside House (90 rooms)

Pole (X) leads to an upper ledge where seepage water was caught in basins cut in the stone.

View of Kit-Sil from the right.
Upright poles mark wall
supports or kiva ladders.

Kit-Sil from the left.
(X) shows roof opening.

Part of Kit-Sil showing
doors in walls.

Another view of Kit-Sil
Walls show remarkable
resemblance to modern
structures.

Room in Kit-Sil made of upright willows plastered with mud.

Rear rooms and passage — Kit-Sil.